

their origin to the mutual reaction of the simple organic material and the surrounding fluid? Chemistry demonstrates how very materially substances are affected by the chemical taking up of water; and there is good evidence to show that organized tissue may be very greatly modified in its chemico-vital endowments by contact with water and other fluids, and that the formation of a pellicle or film around it is no proof of the histogenetic independence of this film as a tunic. These inquiries are further suggested by Auerbach's researches, according to which a membrane encloses and limits the whole simple substance or sarcode of the *Amœbæ*, although all the phenomena of variability, of adhesion, and of confluence of their processes proclaim the contrary. In reference to these researches we will finally ask, Do not the very means resorted to in order to detect the existence of a limiting membrane concur to produce a pellicle which may be mistaken for the independent structure sought for?—J. T. A.]

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XIV.—*Notice of a second Species of Paragorgia discovered in Madeira by Mr. James Yate Johnson. By Dr. J. E. GRAY, F.R.S.*

MR. JAMES YATE JOHNSON, along with a large and most interesting collection of fish from Madeira, has sent to the British Museum a very fine and large specimen of *Paragorgia*.

The species on which the genus is established is found on the coast of Norway, and is the subject of an elaborate memoir, illustrated by excellent figures, by Kölreuter, in the 'Novi Commentarii Acad. Petrop.' 1758 & 1759, p. 345, tab. 13, 14, 15 & 16.

It was first described and figured by Clusius (Exotic. p. 119), who gives a good figure of the stem, and who received it from Norway.

It is well described by Pontoppidan (Norges Natuurlige Historie, i. No. 12. fig. 5). He figures two varieties, one much more slender than the other.

It is also well described and figured by Esper, Pflanzen-thiere, iii. 10, t. 1 *a*, with yellow, and t. 1 & 1 *b*, with redder bark.

All these works describe the polypes as congregated in short, roundish tuberculiform branches on the large, slightly branched main stem.

The specimen from Madeira resembles the Norwegian specimens in many characters, especially in the thickness and compressed form of the main stem; but it differs from that species in being studded with numerous slender, repeatedly-divided branches, which are covered on the upper surface with numerous

close, rather prominent cells, which are more abundant on certain parts of the branches, and form roundish nodules.

This species may be named *Paragorgia Johnsoni*, after its discoverer.

*Hab.* Madeira.

XV.—*A Revision of the History, Synonymy, and Geographical Distribution of the recent Cranial and Orbicular.* By LOVELL REEVE, F.L.S., F.G.S.

1. CRANIA, Retzius.

THE shell of this Brachiopod was first known in a fossil state. The calcifying functions of the animal are exercised chiefly by the under lobe of the mantle, for the secretion of a thickened adherent valve, unconnected by any hinge or ligament with the upper valve; and, before the time of Linnæus, it was named *Nummus*, and sometimes *Nummulus Brattenburgensis*, "Brattenburgh money." Linnæus and Chemnitz still confounded recent and fossil specimens together; and the separation of the valves led naturalists, among whom were Müller and Montagu, to describe them as Limpets. A curious character in the adherent valve of this genus, and which seems to have attracted the attention of Linnæus, is a similitude, in the configuration of the internal muscular scars and protuberances, to a human face. A little above the centre a raised callosity, termed the rostellum, forms the nose, and the scars of the two posterior adductor muscles of the animal give the resemblance of a pair of eyes, while the anterior thickened rim serves for the outline of the cheeks and chin. This fanciful representation suggested to Linnæus the name *Anomia craniolaris*; and *Crania* was soon afterwards proposed by Retzius to separately distinguish the group.

Defrance described several fossil species of *Crania*. The first special monograph of the genus which included the recent species was made, in 1828, by M. Höninghaus of Crefeld. Since that period, the *Crania* have been ably studied by Sowerby, Deshayes, Davidson, and Suess; and, although little has been added to our knowledge of the species, some interesting particulars have been collected of their geographical and bathymetrical distribution and their bearings on geological phenomena. The revision which I propose to make of the synonymy will be indicated in the following analysis of the species. Only four recent species have been collected. *C. anomala*, of our own coast, the best-known species of the genus, ranges from Spitzbergen, in the north of Europe, to Vigo Bay, in the south. Here it stops.